## ADHERENCE TO THERAPY WITH DIFFERENT SECOND-LINE HYPOGLYCAEMIC DRUGS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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**PURPOSE:** To compare short-term adherence and persistence across different second-line hypoglycaemic drugs (sulfonylureas [SULF], thiazolidinediones [TZD], GLP-1 receptor agonists [GLP-1ra], and dipeptidyl peptidase-4 inhibitors [DPP-4i]).

**METHODS:** Using the healthcare utilization databases of the Italian Lombardy region, we selected adult patients who started a second-line hypoglycaemic drug as add-on to an underlying metformin treatment between January 1st, 2008 and December 31st, 2011. Within 1-year follow-up, we estimated adherence as proportion of days covered (PDC) and persistence as the lack of any discontinuation longer than 60 days between two consecutive prescriptions.

**RESULTS:** Overall, 9161 patients were included in the final cohort (70.3% SULF, 7.4% TZD, 15.5% DPP-4i, and 6.8% GLP-1ra). The percentage of subjects who stopped the second-line therapy after the first prescription was lower for the most recent drugs (6.1% DPP-4I and 8.3% GLP-1ra; 15.1% SULF and 24.7% TZD). Mean adherence level ±SD was higher for GLP-1ra (78.5±21.6) and for DPP-4i (76.0±20.2) and lower for SULF (54.8±29.3) and TZD (52.6±25.2). At the end of the follow-up, more than 70% of patients treated with DPP-4i or GLP-1ra were persistent, vs 32-37% of patients treated with the other drugs. Treatment with DPP-4i or GLP-1ra was associated with about a 2-fold probability to be adherent or persistent compared with sulfonylureas.

**CONCLUSIONS:** The prescription of the most recent options for second-line treatment of T2DM may result in an increased patient adherence, which would in turn facilitate the achievement of glucose level goals and the prevention of T2DM complications.